

IN THE CLAIMS:

Listing of Claims:

- ①²
1. (Previously Amended) A retroviral vector comprising one or more promoters inserted in antisense orientation within the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as the 5' LTR region of the resulting provirus in a fashion where the promoter is located upstream of the coding sequence and drives expression of the coding sequence.
 2. (Previously Amended) The retroviral vector according to claim 1, wherein said one or more promoters is inserted within the U5 region of the 5' LTR.
 3. (Currently Amended) The retroviral vector according to claim 1, wherein said one or more coding sequences is inserted within the U3 region of the 3' LTR.
 4. (Previously Amended) The retroviral vector according to claim 1, wherein said one or more coding sequences comprises DNA which is heterologous to the vector.
 5. (Previously Amended) The retroviral vector according to claim 4, wherein said one or more coding sequences is selected from one or more elements of the group consisting of marker genes, therapeutic genes, antiviral genes, antitumour genes, cytokine genes, toxin genes and combinations thereof.
 6. (Previously Amended) The retroviral vector according to claim 1, wherein said one or more promoters is a constitutive promoter.
 7. (Original) The retroviral vector according to claim 1, wherein said retroviral vector is replication-defective.

8. (Original) The retroviral vector according to claim 7, wherein said retroviral vector is based on a vector of the pLXSN family.

9. (Original) The retroviral vector according to claim 1, wherein said retroviral vector is based on a promoter conversion vector.

10. (Previously Amended) A recombinant retroviral vector system comprising:
a) a retroviral vector comprising one or more promoters inserted in antisense orientation within the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus in a fashion where the promoter is located upstream of the coding sequence and drives expression of the coding sequence, and

b) a packaging cell line harbouring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

11. (Previously Amended) A retroviral particle produced by transfecting a packaging cell line of a retroviral vector system with a retroviral vector comprising one or more promoters inserted in antisense orientation within the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus in a fashion where the promoter is located upstream of the coding sequence and drives expression of the coding sequence, and isolating the resulting retroviral particle.

12. (Original) A retroviral provirus produced by the infection of target cells with a recombinant retroviral particle according to claim 11.
13. (Previously Amended) An mRNA of a retroviral provirus according to claim 12.
14. (Previously Amended) An RNA of a retroviral vector according to claim 1.
15. (Original) A host cell infected with a retroviral particle according to claim 11.
18. (Currently Amended) A method for introducing a nucleotide sequence into target cells comprising:
- a) contacting a cell population comprising the target cells with an infective amount of recombinant retroviral particles according to claim 11, wherein the target cells are susceptible to infection by the recombinant retroviral particles and the nucleotide sequence is selected from the group consisting of a nucleotide sequence which is homologous to the target cell, a nucleotide sequence which is heterologous to the target cell and combinations thereof; and
 - b) maintaining the cells under conditions in which the target cells are infected with the recombinant retroviral particles, thereby introducing the nucleotide sequence into the target cells.
22. (Previously Amended) A retroviral vector comprising one or more promoters inserted in antisense orientation within the U5 region of the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the U3 region of the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus in a fashion wherein the promoter is located upstream of the coding sequence and drives expression of the coding sequence.

23. (Currently Amended) The retroviral vector according to claim 22, wherein said one or more coding sequences comprises DNA which is heterologous to the vector.

24. (Currently Amended) The retroviral vector according to claim 23, wherein said one or more coding sequences is selected from one or more elements of the group consisting of marker genes, therapeutic genes, antiviral genes, antitumour genes, cytokine genes, toxin genes and combinations thereof.
